EMPIRICAL ANALYSIS OF STRATEGIC SOCIOLOGICAL THEORY AND IT'S INTERDISCIPLINARY RELATIONS: A MANAGERIAL AND ECONOMIC PERSPECTIVE

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ABSTRACT

The necessity of using the potential not of traditional philosophy, but of the philosophy of science is substantiated in order to eliminate the many difficulties encountered in determining the status of sociological theory. In this regard, the theory of conceptual transduction was chosen as the methodological basis of the article. Sociology is understood as the management of sociological concepts of subjects, principles, laws, and variables through the methods of deduction, adduction, induction, and abduction. The developed concept is used to criticize other concepts, in particular, those focusing on the semiotic triad consisting of syntactic, semantics and pragmatics. Considerable attention is paid to the meaning of sociological theory and attempts to oppose theory to data and then belittle its significance for the fate of sociology. The need to increase efforts to identify the philosophical and scientific foundations of sociological theories and the development of interdisciplinary ties of sociology with other branches of science is noted.

Keywords: Interdisciplinary Ties of Sociology, Methodological Basis, Traditional Philosophy, Status, Criticize.

INTRODUCTION

In sociology, even one step cannot be taken without the concept of 'theory'. And this is in conditions when there is no desired certainty regarding the content of this concept. Even the authors of special monographs on sociological theories avoid defining them. Ritzer (2011) writes in his book *"Sociological Theory"*: *"The theories treated in the body of this book have a wide range of application, deal with centrally important social issues, and have stood the test of time. The secriteria constitute my definition of sociological theory"* (Ritzer, 2011). This, of course, is not a definition of sociological theories, but an attempt to outline their field of influence, not limited by any formal requirements. By the way, it should be noted that this field is recognized as very extensive. The three authors *of "The Emergence of Sociological Theory"* characterize the efforts of the distinguished founders of sociology in a very significant way. And again, the field of action of sociological theory turns out to be infinitely large. We will have to return to this circumstance later (Turner et al., 2011). Determining the meaning of sociological theory faces

significant difficulties (Abend, 2008; Winther, 2016). In our opinion, this is the case insofar, as a rule, the status of the science within which the meaning of sociological theory should be determined is mistakenly determined. At first glance, it should be about sociology. But this answer alone is not sufficient. The following fundamental circumstance should be taken into account. Each science uses the services of auxiliary sciences, for example, logic, mathematics, computer science. If, for example, one is interested in the system of calculus of sociology, one will have to somehow take into account its interdisciplinary connections with mathematics. Otherwise, the characteristics of the systems of the calculus of sociology will certainly be impoverished. As for the auxiliary sciences, they are usually called formal, since they do not express the features of independent sciences. In our opinion, this is a clear delusion. The relationship between independent and auxiliary science develops in stages. First, researchers extract from independent science that aspect which falls within the competence of auxiliary science. They do the same with all other sciences independent of auxiliary science. Then the achievements of all independent sciences are generalized and returned in a new form to the original science in such a way as to present its features. If, for example, mathematical game theory is used in sociology, this does not mean that it is indifferent to the peculiarities of sociology. What auxiliary science is called upon to express, along with sociology, the status of sociological theory? The answer to this question involves taking into account the centuries-old experience in the development of various sciences. We take the liberty of affirming that this science is the philosophy of science, not philosophy. This is not the place to consider the relationship between philosophy and philosophy of science. Let us only note that in our age of true science, scientific philosophy is precisely the philosophy of science, and not its metaphysical correlates, known collectively as 'philosophy'. The subject of philosophy of science is the conceptual and methodological content of scientific theories. To be convinced of the correctness of this statement, it is enough to turn to the achievements and failures of the most famous projects of philosophy of science, in particular, positivist, critical-rationalistic and philosophical-analytical. The decisive feature of our article is that the status of sociological theory is determined taking into account the achievements of the philosophy of science.

LITERATURE REVIEW

In the competition between the best projects of the philosophy of science, an extremely relevant circumstance was revealed, which, in our opinion, has not yet been properly understood. Neopositivists, guided by experimental data, tried to literally deduce the phenomenon of scientific theory, which acts as a set of laws universal for a given field of research. This project ran into insurmountable difficulty. Hanson (1958) noted that "*seeing is a 'theory-laden 'undertaking".* Quine (1981) considered "*all objects as theoretical. Even our most primordial objects, bodies, are already theoretical". "Experience arises together with theoretical assumptions not before them, and an experience without theory is just as incomprehensible as is (allegedly) a theory without experience"* (Feyerabend, 1975). As it turned out, the opposition of theory and facts so often conducted is untenable, it is impossible to separate facts from theory. At this point, it is reasonable to return to the research of sociologists. As noted above, they do not find such corners in sociology that would not be influenced by theories. In sociology, sociological theories are ubiquitous. Something similar takes place also in other sciences. In physics, physical theories are ubiquitous, in economics, economic theories, etc. There is nothing in the sciences that can be separated from theories. Everything that is in the sciences is a manifestation, a presentation of theories. It is about the principle of theoretical representation,

according to which all scientific phenomena are representations of theories. Sociology is made up of theories; it has nothing but theories. This conclusion is disputed by Kincaid (2012). *"There is much more to science than theories: experimental setup and instrument calibration skills, modeling ingenuity to facilitate statistical testing, mathematical insight, experimental and data analysis paradigms and traditions, social norms and social organization, and much else – and these other elements are important to understanding the content of theories"* (Kincaid, 2012). In reality, we are not able to say something reasonable about anything, including devices and experimental skills, in a form other than theoretical. In this sense, the history of the development of quantum mechanics is very indicative. For a long time, physicists did not extend it to measuring instruments. At this time, it seemed that the devices did not belong to theory. In the 1980s, in connection with the development of the theory of decoherence, devices also began to be considered as objects of quantum mechanics. This made it possible to overcome a number of quantum mechanical paradoxes. In our opinion, the achievements of science unequivocally indicate that a thorough understanding of any phenomena is always theoretical and nothing else. To understand the nature of theories, including sociological ones, one should become familiar with their content. Our decisive conclusion is as follows. In all theories, concepts are found that scientists manage through methods. The conceptual side of the matter is that the objects of natural theories, subjects of axiological theories and uniforms, for example, numbers and geometric shapes, of formal theories, are represented by principles, laws, and variables. Sociology is an axiological science. Its subjects are social organizations and their parts, including individuals. The principles are the motives of people's actions. Laws are relationships between variables determined by principles. Variables are measurable quantities. The methods of the theory are deduction, adduction, induction, and abduction. Deduction is a method of predictions, including expectations. It acts as a transition from principles to laws and variables. Adduction is a method of obtaining facts through observations, experiments, and human actions, usually accompanied by measurements of variables. Induction is a method of processing facts that allows you to determine the mean values of variables, the laws, principles, and causes and effects. Abduction is a method of revising the original principles in accordance with the received inductive principles. The sequence of the four discussed methods forms the cycle of conceptual transduction. The meaning of each of the four methods is determined by its place in the specified loop. The considered methods characterize what happens inside the theory, namely, intratheoretical conceptual transduction. It always results in the emergence of a new theory. In this regard, researchers are forced to consider intertheoretical relations. Often a partially obsolete theory is the limiting case of a new theory. In this case, league-theories are formed, headed by the most developed conceptions. League-theory is, for example, the theory of labor value of Marx-Ricardo-Smith. If the new theory is incommensurable with the old theory, then there are interdisciplinary connections, for example, the relationship between sociological and economic theory. Each of the disciplines is considered first as the main conception, theory-acceptor, and then as a theory-donor. Theory-donor is seen as a symbol of the theory-acceptor. For a sociologist, a sociological conception is always a theory-acceptor. Thus, the dynamics of scientific knowledge includes intratheoretical, intertheoretical, and interdisciplinary transduction. As for a separate theory, it is the management of concepts through the methods of deduction, adduction, induction, and abduction. It is extremely important to understand that the theory is a whole. Otherwise, it would make no sense at all to speculate about the nature of the theory. It is precisely this circumstance that many researchers do not take into account, as a rule, opposing the theory to its parts, for example, facts or practice. Scientific analysis is intended to express not

the transition from facts or practice to theory, but their place in its composition. In the previous section, the nature of the theory was interpreted in terms of the theory of conceptual transduction. Much more often it is considered from the standpoint of syntactic, semantic, and pragmatic views. As you know, these three dimensions of the semiotics were proposed by Morris (1938). Semiotics is studied by the ratio of signs to one another (syntactic), to their objects (semantics), and to the interpreters (pragmatics). Each of these three approaches corresponds to a specific concept of theory (Winther, 2016). With the syntactic approach, the theory acts as a not interpreted system of logical and/or mathematical axioms, this is associated with the language of observations by correspondence rules. In the semantic approach, the axioms of theory coexist with models of theories, experiments, and data. Relations of isomorphism and similarity are usually established between these four units. In a pragmatic approach, the theory is interpreted according to the criteria of practice about which the desired clarity is lacking. We pass on to criticism of the views discussed in the previous paragraph. First of all, we note the dubiousness of syntactic, semantic, and pragmatic views. In the semantic approach, theory is contrasted with the area of its interpretation. But this is contrary to the principle of theoretical representation. Nothing definite can be said about the field of interpretation, bypassing theory. With a syntactic approach, theory appears as something monosyllabic, simple. This means that the content of the theory is clearly emasculated. And again, the principle of theoretical representation is violated. The language of theory is opposed to the language of observation. But nothing intelligible can be said about this language, as well as about the rules of correspondence of two languages without theory. In pragmatics theory is contrasted with practice. From the standpoint of the theory of conceptual transduction, such an opposition is also untenable. Practice must not be opposed to theory; it is an organic part of it. The considered semiotic approach uses the linguistic representation of the theory. Other representations of the theory, in particular, mental, sensory-emotional, behavioral, are not used. Once again, we have to state the impoverishment of the theory. The desire of researchers to interpret the nature of the theories solely from the standpoint of logic and mathematics is also worthy of assessment. It should be borne in mind that along with them, auxiliary theories are concepts from the field of linguistics, computer science, and philosophy of science. Ignoring the latter, especially the philosophy of science, also impoverishes the idea of the status of theories, including sociological ones. Thus, the characterization of the status of a theory from the standpoint of semiotics in the form in which it exists at a given time seems to us clearly insufficient. An interesting concept of sociological theory was developed by Abend (2008). Authors using the concept of 'sociological theory' have encountered significant semantic difficulties. In this regard, Abend offers a specific therapy of semantic predicament. At the beginning of his analysis, he identifies seven meanings of the term 'sociological theory' found in the literature.

1. *$Atheory_1$ "is a general proposition, or logically-connected system of general propositions, which establishes a relationship between two or more variables"* (Abend, 2008).
2. *"$Atheory_2$ is an explanation of a particular social phenomenon"* (Abend, 2008).
3. *$Atheory_3$* is an interpretation of a certain slice of the empirical world.
4. *$Atheory_4$* points to the study of the writings of some author (Abend, 2008).
5. *$Atheory_5$* is an overall perspective, conceptual and linguistic equipment, from which one sees and interprets the world.
6. *$Atheory_6$* refers to accounts that have a fundamental normative component (Abend, 2008).
7. *$Atheory_7$* often *"refers to the study of certain special problems that sociology has encountered"* (Abend, 2008)

The given definitions of sociological theory are accompanied by numerous lexical ambiguities that lead to undesirable consequences. These definitions require critical research to help clarify the meaning of sociological theory. An attempt to identify the only correct meaning of the term *"sociological theory"* does not lead to success. It does not take into account the multiplicity of meanings of this term and the difference between sociological theories and the concepts of natural science. In Abend' (2008) view, semantically, the path outlined by Levine (1997) and Alexander (1982) is promising. Levine (1997) believed that the meaning of sociological theories would become clearer if, in relation to them, the abstract, or the rational, rather than the empirical, general, rather than concrete, contemplative, rather than practical, exegetical rather than heuristic was highlighted. Alexander considers general presuppositions, models, concepts, definitions, classifications, laws, complex and single prepositions, correlations, methodological assumptions and observations as elements of the scientific continuum in which there are no hard boundaries between theory and data (Alexander, 1982). Abend (2008) considers this position to be particularly innovative. He himself comes to the following conclusion. What the term 'theory' refers to depends on the implementation of certain practical policies. This means that sociology implements the principle of practical reason. It is complemented by theprinciple of ontological and epistemological pluralism. The second principle is somewhat restrictive. This means that ontological and epistemological obligations are minimal. It is time to begin a critical examination of Levin's theory. First of all, we note that it belongs to the family of pragmatic conceptions. This circumstance is clearly indicated by the principle of practical reason. In essence, it is about ensuring the future of democratic culture and endowing it with high meanings. Another feature of Levin's theory is that it is not built on behalf of the philosophy of science. Otherwise, there would certainly be a conversation about scientific methods. To their significance should be paid special attention. Methods hold concepts together into a coherent whole, like a network that, as a result of the increase in scientific knowledge, becomes progressively solid. That is why it is impossible to break scientific knowledge into fragments, connecting concepts in an arbitrary way. Both the concepts and the methods of the theory are in well-defined places. They do not change places or orders. Laws are deduced from principles; it is impossible to deduce principles from laws in a deductive way. Induction follows adduction and precedes abduction. There is no other way. The conclusion considered above about a movable boundary between theories and facts is untenable. Data as the results of measurements, including observations, are part of sociological theory. Along with theories, data also change, but in any case, they are the results of measurements. Of course, sociological theories are constantly improving, but their framework remains the same. Abend (2008) quite rightly raised the question of the semantic difficulties of sociologists in connection with their use of the concept of 'theory'. Our decisive disagreement with him concerns the question of the content of an adequate, as he puts it, semantic therapy. We propose to conduct this therapy from the standpoint of the philosophy of science. While avoiding this path, he draws a conclusion that is incompatible with the methodological structure of scientific theories. In our opinion, many semantic difficulties are overcome if consistently to be guided by the conclusion that sociological theory is the management of concepts through the methods of intratheoretical transduction. Besbris & Khan (2017), looking at the relationship between article authors, reviewers, and journal editors, concluded that sociology must worry less about theoretical innovation and more about empirical description. This conclusion, as we will show below, testifies to the fact that the mutual misunderstanding of some sociologists has reached a critical level. Before turning to the main statements of Besbris & Khan (2017), let us clarify the situation

in question. Sociologists are called upon to develop sociological theories in every possible way, all of its parts, including descriptions, which usually refer to the facts obtained in the process of measurements. New knowledge is achieved through cycles of conceptual transduction, each of which is implemented in stages: prediction → obtaining facts and their description → data processing → updating the initial principles or introducing fundamentally new ones. The description is part of the theory, the more scientifically relevant facts, the more solid the theory. It is impossible to achieve the proper scientific success by belittling the significance of any stage of intratheoretical transduction. Reviewers and journal editors now and then have to evaluate articles whose authors do not implement all the stages of conceptual transduction. For example, experimental data are presented, but it is not noted how their certainty affects the principles and laws. Or, on the contrary, they talk about concepts, principles, and laws, but their connection with empiricism is not traced, in particular, it is not known how the attributes of concepts are measured. In the cases under consideration, the claims of reviewers and editors against the authors of the articles are quite appropriate. In essence, they insist that conceptual transduction be genuine and not imaginary. As for the disagreement between authors, reviewers, and editors, it is evidence of a misunderstanding of the status of sociological theory. After the clarifications made, it is not difficult to understand the fallacy of many of Besbris & Khan's (2017) statements. Some of them are given below together with our comments. A correct understanding of scientific creativity as the development of sociological theories excludes the primacy of theory over empirical experience or of this experience over theory. The sociologist's creativity does not consist in maintaining the status quo of existing theories. Their development is required so that we better understand ourselves and others. As already noted, scientific creativity necessarily presupposes the development of theory. If a publication does not meet this requirement, then it is not scientific. Developing concepts is always a tricky business. If reviewers agree to a frivolous introduction of new concepts, then they themselves violate the canons of scientific creativity and demand the same from the authors of the articles. This statement is not true. A rich theory is in no way compatible with a vacuum of ideas (Besbris & Khan, 2017).

METHODOLOGY

In the Introduction, we noted the need to refer to the achievements of the philosophy of science. Of course, it must be methodologically verified. In this regard, we focus on the theory of conceptual transduction developed by Kanke (2018). It includes a consistent synthesis of the achievements of all branches of science, including their methodological components. It is in this connection that special attention is paid to intratheoretical methods, namely, deduction, adduction, induction, and abduction. If the concept of sociological theory organically corresponds to the theory of conceptual transduction, then it is accepted. Otherwise, its metaphysical foundations are revealed, leading to an erroneous determination of the status of sociological theory. The concept of the philosophy of science used by us is not prescribed to scientific theories, is not imposed on them from the outside, but is a generalization of their own methodological nature.

RESULTS AND DISCUSSION

The interdisciplinary relationship of sociology should be emphasized. There is no doubt that this relationship unites it with all other branches of science. It is well known that sociology uses, in particular, the achievements of such sciences as logic, mathematics, computer science,

linguistics, philosophy of science. In all these cases, sociology acts as an acceptor branch of science, which uses other branches of science as donor theories. The donor functions of sociology itself are much less known. Like mathematics, sociology is vital for all sciences. The fact is that the subjects of the development of any science are, along with individual individuals, social groups of people with their ambiguous structure and peculiar interests. Scientists work in communities and are not free from them. This means that any scientific community possesses sociological relativity. Accordingly, any science exists in a sociological envelope. Sociology is designed to ensure the most effective development of group activities, including in scientific communities. It is in this connection that the hour of sociology comes. Sociology creates a wide range of perspectives, of which, in our opinion, the most important are structural-functional, conflict, and interactional. The structural and functional perspective involves the organization of active groups of scientists and the optimization of their functions. The conflict perspective seeks to create innovations that overcome counterproductive conflicts. An interactive perspective focuses on the interactions of individual groups in the scientific community, often differing from each other in their gender and age characteristics. Sociology as a donor science is designed to promote scientific creativity. In this capacity, it imposes a certain stamp on every science. The main focus of scientific creativity is set by the mission of the scientific community. At first glance, these missions do not contain a sociological component. It is difficult to define, for example, the sociological component in missions of the American, European, London, and Moscow mathematical communities. Nevertheless, these missions set the basic principles of scientific activity of the community, which are strictly guided by researchers, ensuring the successful development of the sociological relativity of mathematics. The situation is similar in other branches of science. At the same time, in our opinion, the development of the sociological relativity of this or that science leaves much to be desired everywhere. Not finding a clear characteristic of sociological theory in the existing literature, we substantiated the need to refer to the achievements of the philosophy of science, having chosen the theory of conceptual transduction by Kanke (2018) as an appropriate reference point. In this regard, a definition of sociological theory was developed. Sociological theory is the management of sociological concepts through deduction, adduction, induction, and abduction. We not only developed a conception that was not previously encountered in the literature, but also showed that it allows for meaningful criticism of other concepts of sociological theory, in particular, a semiotic orientation. A significant body of knowledge from many branches of science was involved in the field of our analysis. We hope that the successful identification of the unity of this knowledge testifies to the fruitfulness of the approach we are defending. He gives the whole sociological problem a new turn. In our opinion, the authors of various concepts of the nature of sociological theory will have to reckon with this circumstance. We believe that various concepts of sociological theory can and should be developed. At the same time, we assert with the same confidence that their fruitful development can hardly be carried out far from the philosophy of science including the theory of conceptual transduction.

CONCLUSION

The fate of sociology hardly depends on anything more than on understanding of the status of sociological theory. Today this circumstance is understood more acutely than ever before. The long history of discussion of the nature of sociological theory shows that it needs a solid foundation, not metaphysical, and not just philosophical, but based on the achievements of the philosophy of science. Moreover, these achievements should take into account the

peculiarities of not only natural and formal, but also axiological theories. The development of the philosophical and scientific knowledge necessary for a meaningful representation of the status of sociological theory is a difficult task. We hope this article contributes to some extent to its resolution. Nevertheless, there is an urgent need, first, to increase efforts to identify the philosophical and scientific foundations of sociological theories, and second, to develop the sociological relativity of everyone's branch of science. In this connection, we are hoping for a fruitful discussion with our opponents.

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